Name:_____

Mr. Tiénou-Gustafson & Mr. Bielmeier

Geometry, Period_____

Due Date: Thu, 26 Mar 2015

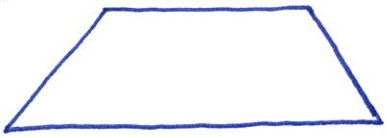
HW127_TrapezoidArea

Geometry Homework

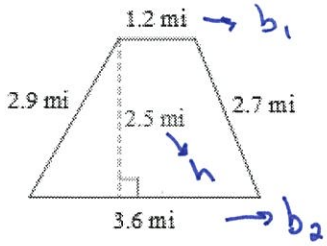
Failure to show all work (mark up all diagrams and write out needed formulas) and/or write in complete sentences will result in LaSalle.

1) *Explain WHY the area of a trapezoid is* $\frac{1}{2}(b_1 + b_2)h$. Draw a picture to diagram your explanation.

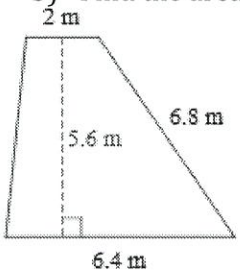
We did this in class!



2) Find the area of the trapezoid below.



3) Find the area of the trapezoid below.

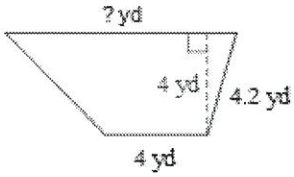


What's b_1 = ?

What's b_2 = ?

h =

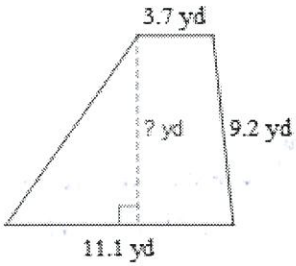
4) Find the missing side.



Area = 26 yd²

$26 = \frac{1}{2}(b_1 + b_2)h$

5) Find the missing side.



b_1 =

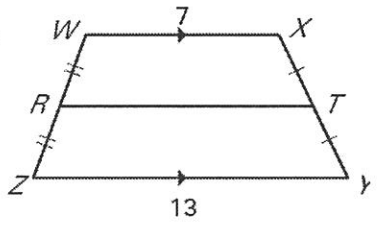
b_2 =

h =

Area = 68.1 yd²

6) Find the **midsegment or median**, RT.

a.



7) Use diagram from #1 to answer the questions below. Given: the height of trapezoid WXYZ is 8.

What is the area of **WXTR**?

What is the area of **RTYZ**?

What is the area of **WXYZ**?

Define Your Pride.

8) The area of a trapezoid is 55 square inches. The length of the shorter base is 10 inches and the height is 5 inches.

a. Draw a diagram.

b. Write the formula for the area of a trapezoid.

c. What is the length of the other base?

$A =$

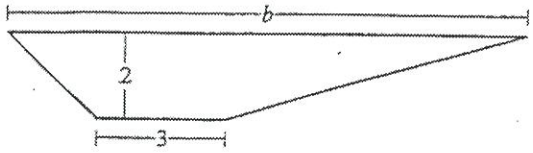
$b_1 =$

$b_2 =$

$h =$

9) 2)

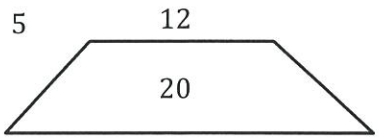
The area of the trapezoid below is 16 square inches, the altitude is 2 inches, and the length of one base is 3 inches. What is the length, b, of the other base, in inches?



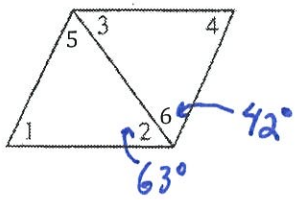
a. Solve for the unknown base.

b. Check that your answer is correct with "proof" from the formula for the area of a trapezoid.

10) The bases of the isosceles trapezoid shown below are 12 feet and 20 feet long, respectively. What is the distance, in feet, between these two bases?



11) In the parallelogram below, a diagonal is shown and $\angle 2$ measures 63° and $\angle 6$ measures 42° What is the $m\angle 4$?



12) Which point is the **y-intercept** of the line $10x - 5y = 100$?

$y = mx + b$ → this is your y-intercept

13) In the standard (x, y) coordinate plane, a certain line is represented by the equation **6x – y = 8**. At what point will the line cross the **x-axis**?

this is where $x = 0$ plug in to the equation given

14) A painter leans a 25 foot ladder against a house. The side of the house is perpendicular to the level ground, and the base of the ladder is 10 feet away from the base of the house. To the nearest foot, how far up the house will the ladder reach?

15) Jessica wants to draw a circle graph showing the favorite teachers at her school. Her classmates chose the following in a poll: 32% said Mr. T-G, 35% said Mr. B, and 33% said Ms. Mitrovich. What will be the degree measure of Mr. B's sector (or section) of the circle graph? *(Hint: remember how many degrees are in a circle! This problem isn't as hard as it sounds. ☺)*